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Two New Species of *Encarsia* (Hymenoptera: Aphelinidae) from Taiwan

L. Y. Chou[1], Y. S. Su[1], K. C. Chou[1], and C. C. Ko[2]

1. Department of Applied Zoology, Taiwan Agricultural Research Institute, Wufeng, Taichung, Taiwan, R.O.C.
2. Department of Plant Pathology and Entomology, National Taiwan University, Taipei, Taiwan, R.O.C.

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ABSTRACT

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Two new species of the genus *Encarsia* Foerster, *E. abundantia* Chou & Su and *E. collecta* Chou & Su, from Taiwan are described and illustrated.

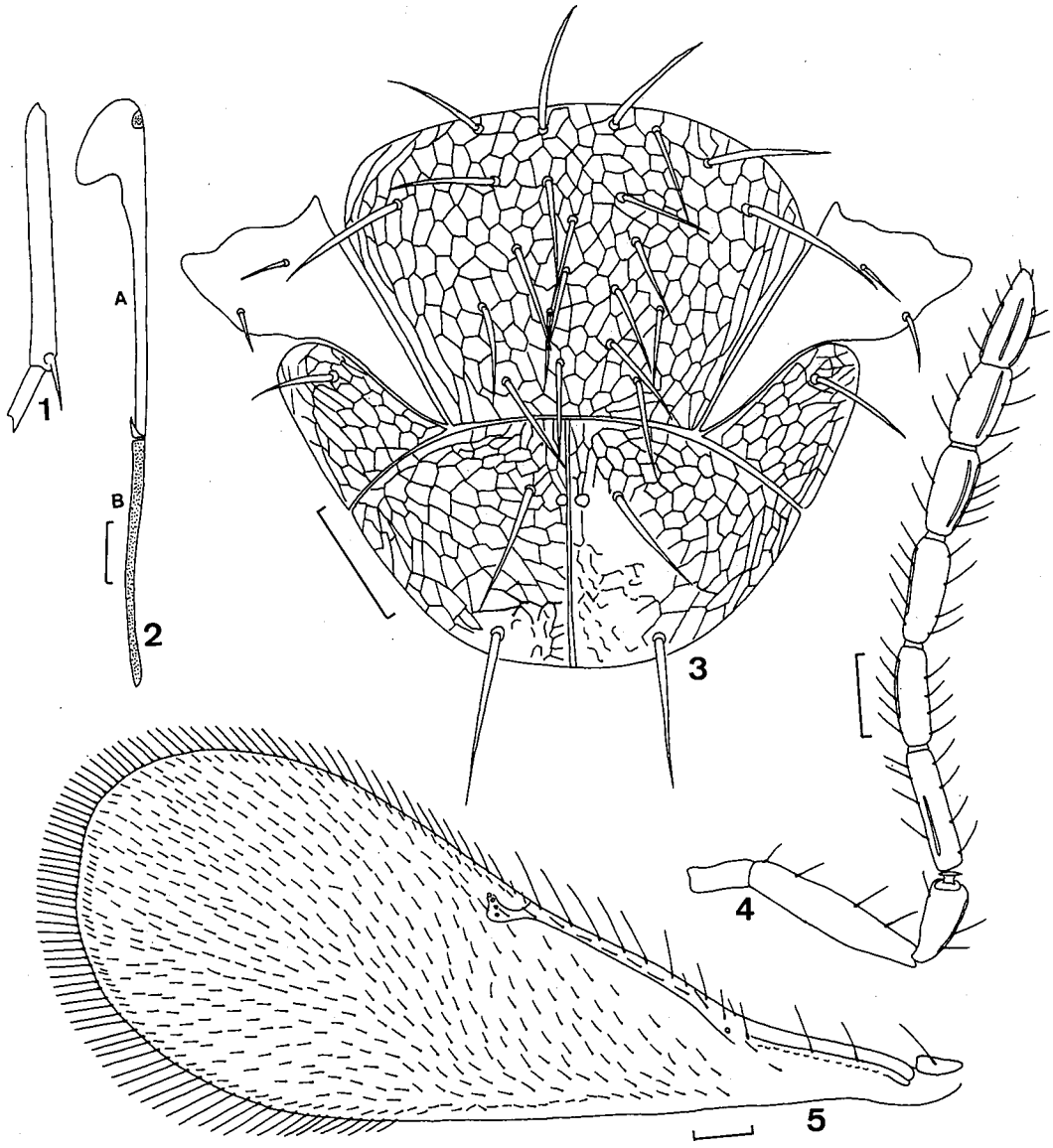
(Key words: *Encarsia*, Aphelinidae, Aleyrodidae, Taiwan)

INTRODUCTION

The species of the genus *Encarsia* Foerster are parasitoids of whiteflies, scale insects and aphids. It contains about 230 species worldwide, including 21 species in Taiwan[1-5]. In this paper 2 new *Encarsia* species are described from Taiwan. The authorship of the name of new species are L.Y. Chou and Y.S. Su. The terminology used in this paper follows Hayat[3]. The specimens used in this study are deposited in the Insect Collection of the Taiwan Agricultural Research Institute, Taichung, Taiwan, R.O.C.

Encarsia abundantia Chou & Su sp. n. (Figs. 1-5)

Female: Head and mesosoma brown to dark brown, side lobe of mesoscutum, axillae, apical scutellum, and median part of metanotum and propodeum yellow to pale



Figs. 1-5. *Encarsia abundantia* Chou & Su sp. n. ♀ : 1, middle tibia and basitarsus; 2, second valvifer (A) and third valvula (B); 3, mesonotum; 4, antenna; 5, fore wing (scale 0.5 mm).

brown; gaster largely yellow to pale brown, except each side of terga I-VI brown; 3rd valvula pale brown to brown. Antenna yellow, scape basally and F6 more or less brown. Fore wing hyaline. Legs pale yellow; fore and hind coxae dark brown, middle coxa slightly infuscated at base.

Frontovertex 1.3-1.6 times as long as dorsal eye width; mandible tridentate; mouth fossa 0.48-0.57 times as long as frontovertex; eye with pale brown setae;

setae on frontovertex dark brown. Antenna as in Fig. 4; F1 1.3-1.6 times as long as pedicel; F1 3.5-4.5 times as long as wide, 1.1-1.3 times as long as F2, and subequal in width to F2; F2 subequal in length to F3; F3 1.1-1.2 times as long as F4.

Mesonotum as in Fig. 3; mid lobe of mesoscutum with 17-28 dark brown setae; side lobe with 2 pale brown setae; axillae with 1 dark brown seta; distance between anterior pair of scutellar setae shorter than that between posterior pair; scutellar sensilla separated by a distance less than width of one sensillum; fore wing as in Fig. 5; basal cell with 1-2 setae; marginal vein with 7-9 setae; submarginal vein with 2 setae; marginal fringe about 0.20 times as long as fore wing width. Middle tibial spur 0.70-0.86 times as long as middle basitarsus (Fig. 1); hind tibia slightly longer than middle tibia.

Petiole plus gaster about 2 times as long as mesosoma; terga II-VI with 1+1, 1+1, 1+1, 2+2+2, 1+2+1, respectively; tergum VII with 5-9 setae. Ovipositor extends from base of gaster and exserted at apex; 3rd valvula 0.72-0.86 times as long as 2nd valvifer (Fig. 2); ovipositor 2.1-2.4 times as long as middle tibia (Figs. 1, 2).

Male: Unknown.

Material examined: Holotype ♀, TAICHUNG: Wufeng, 23.XI.1994, ex *Dialeurodes tetrastigmae* on *Tetrastigma formosanum* (K.C. Chou). Paratypes: TAICHUNG: Wufeng, 3♀, 12.IV.1994, ex *D. kirkaldyi* on *Jasminum sambac* (K.C. Chou); 1♀, 24.X.1994, ex *D. kirkaldyi* on *Hiptage benghalensis* (K.C. Chou); 1♀, 7. XII.1994, 1♀, 25.IV.1995, & 1♀, 9. VIII. 1995, ex *D. tetrastigmae* on *Tetrastigma formosanum* (K.C. Chou). NANTOU: Chunglio, 1♀, 30.IX.1994, ex *D. citri* on *Citrus ponk* (K.C. Chou); Lienhuachih, 2♀, 14.IV.1994, ex *D. citri* on *Persea* sp.(K.C. Chou); Shuili, 1♀, 6.IX.1995, ex *D. dioscoreae* on *Dioscoreace* sp. (K.C. Chou).

Distribution: Taiwan.

Hosts: *Dialeurodes citri* (Ashmead), *D. dioscoreae* Takahashi, *D. kirkaldyi* (Kotinsky), *D. tetrastigmae* Takahashi (Aleyrodidae).

Remarks: This species differs from other *Encarsia* species by the mid lobe of mesoscutum with 17-28 setae; 3rd valvula 0.72-0.86 times as long as 2nd valvifer; ovipositor 2.1-2.4 times as long as middle tibia.

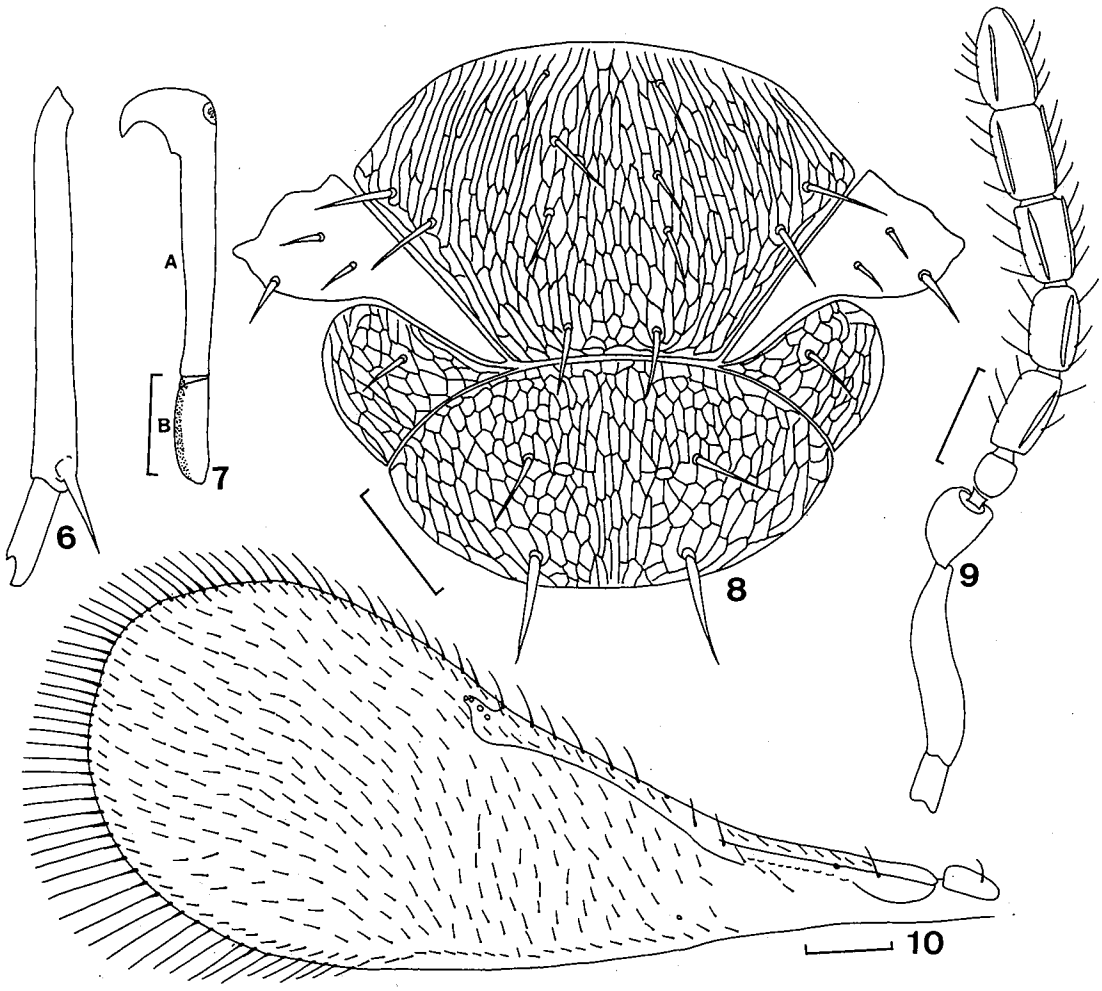
Etymology: *Abundantia* means plenty in Latin, refers to its mesoscutum with rather more setae.

Encarsia collecta Chou & Su sp. n. (Figs. 6-10)

Female: Body brown to dark brown; side lobe of mesoscutum, median part of metanotum and propodeum, petiole, terga I-II and apex of tergum VII yellow to pale brown; 3rd valvula pale brown to brown. Antenna yellow. Fore wing hyaline. Legs yellow.

Frontovertex 4.0-4.2 times as long as dorsal eye width; mouth fossa about 0.30 times as long as frontovertex; eye with pale brown setae; setae on frontovertex brown. Antenna as in Fig. 9; F1 about 0.57 times as long as pedicel; F1 1.0-1.1 times as long as wide, about 0.42 times as long as F2, and 0.78-0.80 times as wide as F2; F2 1.0-1.1 times as long as F3; F3 subequal in length to F4.

Mesonotum as in Fig. 8; mid lobe of



Figs. 6-10. *Encarsia collecta* Chou & Su sp. n. ♀ : 6, middle tibia and basitarsus; 7, second valvifer (A) and third valvula (B); 8, mesonotum; 9, antenna; 10, fore wing (scale 0.5 mm).

mesoscutum longitudinally reticulate, with 11-12 setae; side lobe with 3 dark brown setae; axillae with 1 dark brown seta; distance between anterior pair of scutellar setae more than that between posterior pair; scutellar sensilla separated by a distance more than width of one sensillum. Fore wing as in Fig. 10; basal cell with 3 setae; marginal vein with 10-11 setae; marginal fringe 0.23-0.25 times as long as fore wing width. Middle tibial spur about 0.90 times as long as middle basitarsus; hind tibia distinctly shorter than middle tibia.

Petiole plus gaster about 1.6 times as long as mesosoma. Terga II-VI with 1+1,

1+1, 1+1, 1+2+1, 1+2+1 respectively, tergum VII with 4 setae. Ovipositor extends from tergum IV; 3rd valvula 0.31-0.36 times as long as 2nd valvifer (Fig. 7); ovipositor 1.0-1.1 times as long as middle tibia (Fig. 6, 7).

Male: Unknown.

Material examined: Holotype ♀, TAIPEI: Fushan, 3.VI.1994, ex *Parabemisia myricae* on *Engelhardtia roxburghiana* (K.C. Chou). Paratype: TAIPEI: Mucha, 1 ♀, 7.I.1995, ex *P. myricae* on *Maesa japonica* (K.C. Chou).

Distribution: Taiwan.

Host: *Parabemisia myricae* (Kuwana) (Aleyrodidae).

Remarks: This species differs from other *Encarsia* species by the reticulate sculpture on mesoscutum rather narrow and long.

Etymology: *Collecta* means narrowed in Latin, refers to its reticulate sculpture on mesoscutum rather narrow.

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摘　　要

周樑鎰[1]、蘇怡秀[1]、周根清[1]、柯俊成[2] 1996 臺灣恩蚜小蜂屬(膜翅目：蚜小蜂科)二新種 植保會刊 38: 137-142. ([1]臺中縣霧峰鄉臺灣省農業試驗所應用動物系；[2]臺北市國立臺灣大學植物病蟲害學系)

恩蚜小蜂屬(*Encarsia*)隸屬膜翅目蚜小蜂科，目前全世界已知之種類約有230種；而臺灣有記錄者僅有21種。本文描述臺灣產之2新種，並輔以性狀圖說明。

(關鍵詞：恩蚜小蜂屬、蚜小蜂科、粉蝨科、臺灣)